

Health Advisory:

Tuberculosis Recommendations for University/College Campuses in Missouri

August 7, 2007

This document will be updated as new information becomes available. The current version can always be viewed at <http://www.dhss.state.mo.us/>.

The Missouri Department of Health & Senior Services (DHSS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

Health Alerts convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

Health Guidances contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

Health Updates provide new or updated information on an incident or situation; can also provide information to update a previously sent Health Alert, Health Advisory, or Health Guidance; unlikely to require immediate action.

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Health Advisory
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SUBJECT: **Tuberculosis Recommendations for University/College Campuses in Missouri**

Tuberculosis (TB) is a serious disease whose treatment requires multiple drugs given over a period of months. Of concern is the fact that *Mycobacterium tuberculosis* can become resistant to the drugs normally used to treat TB, resulting in the occurrence of multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB).

Both MDR-TB, which includes resistance to isoniazid and rifampin, and XDR-TB can become significant public health problems, but XDR-TB is a particularly serious concern. XDR-TB is TB that is resistant to almost all of the drugs used to treat the disease, including isoniazid, rifampin, fluoroquinolones and at least one second-line injectable drug (amikacin, capreomycin, or kanamycin). XDR-TB can be transmitted from person to person similar to drug-susceptible TB; treatment options are much less effective and often have worse outcomes. XDR-TB cases have occurred throughout the world, including the United States, where 49 cases of XDR-TB have been reported between 1993 and 2006. While no cases have, to date, been reported in Missouri, the possibility that XDR-TB will eventually occur in the state is very real.

TB cases continue to be diagnosed in Missouri. During 2006, 104 cases of active TB were reported; approximately half of these cases were foreign-born individuals. Eight active TB cases have been diagnosed in foreign-born students attending Missouri universities/colleges since January 2006. The Missouri Department of Health and Senior Services (DHSS) believes that active TB disease cases, as well as cases of latent TB infection (LTBI), will continue to occur among university/college students in the state. In addition, the potential exists that some of these future cases could involve drug-resistant strains of *Mycobacterium tuberculosis*. This Health Advisory is meant to inform student health centers and other medical providers of the risk of TB in student populations, and to provide recommendations for identification of cases and their subsequent management.

DHSS recommends several strategies to ensure early identification and treatment of students with LTBI and TB disease:

1. Establish a partnership with your local public health agency (LPHA).
 - a. The LPHA can identify resources that are available to the university/college.
 - b. The LPHA can provide instructions on how to report cases of LTBI and TB disease.
2. Have in place an effective TB screening policy that includes screening of all students for TB risk factors. As part of this screening, two questions should be asked of all students:
 - a. Were you born in, or have you traveled to, a TB endemic country (Africa, Asia, Latin America or Eastern Europe).
 - b. Have you had contact with someone with TB?
3. Administer a TST (tuberculin skin test) to all students who answer "yes" to either of the above questions. Note that a history of Bacille Calmette-Guerin (BCG) vaccination is not a contraindication for TB skin testing.

4. Consistently enforce policies mandating TB skin testing for at-risk students in order to ensure that testing is completed in a timely manner. Appropriate use of testing is a key factor in preventing transmission of TB on campus and in the larger community.

For students who develop a respiratory illness, the following steps are recommended:

1. **“Think TB” for international students, and for any student with a travel history to endemic countries, who present with a respiratory illness.**
2. Students should be evaluated for TB if they have a persistent cough >3 weeks duration and/or bloody sputum. Other symptoms of TB include unexplained weight loss, night sweats, fever, loss of appetite, fatigue, or an abnormal chest x-ray consistent with TB.
3. Carefully evaluate students with a respiratory illness regarding the need for respiratory isolation. Students with an abnormal chest x-ray consistent with TB should be isolated until infectious TB can be ruled out. Sputum specimens should be collected and sent to the Missouri State Tuberculosis Laboratory (MSTBL) for testing; the diagnosis of TB can be made in approximately 1-2 days. All students with risk factors for HIV should also undergo HIV testing as part of their work-up for TB. Remember, a negative TST does not rule out TB in a symptomatic patient.

Bacille Calmette-Guerin (BCG) is a vaccine for TB disease. It is used in some countries to prevent serious, life-threatening disease in children. BCG is not used in the U.S. because it has limited effectiveness for preventing TB in adults. A history of BCG vaccination is NOT a contraindication for TST or treatment of LTBI in persons with positive TST results. A positive TST result in a college student with risk factors would be $\geq 10\text{mm}$. If the student was a contact to a known active TB case, a $\geq 5\text{mm}$ TST would be considered positive.

Send all sputum or other specimens for bacteriological testing to MSTBL in Mount Vernon, Missouri. MSTBL needs to receive all isolates so that they may be submitted to the Centers for Disease Control and Prevention (CDC) for genotyping. Genotyping assists public health officials in understanding patterns of transmission, and in developing effective public health responses.

For those student health centers or hospitals that have obligations to contract laboratories, we advise submitting an additional specimen to MSTBL, or splitting specimens and shipping one of these to MSTBL. Shipping is provided through MSTBL. For more information or specific instructions, MSTBL can be reached by calling 877/819-6124, Monday-Friday, 8:00am-5:00pm.

Please report all SUSPECTED or known TB cases (you do not have to await confirmatory culture results) to DHSS at 800/392-0272 (24 hours a day, 7 days a week). Questions should be directed to DHSS's Bureau of Communicable Disease Control and Prevention at 573/751-6113, 866/628-9891, or 800-392-0272.

For additional information see the websites listed below:

DHSS's TB website <http://www.dhss.mo.gov/Tuberculosis/>

CDC's TB website <http://www.cdc.gov/tb/default.htm>

CDC's XDR-TB website <http://www.cdc.gov/tb/xdrtb/default.htm>

American College Health Association <http://www.acha.org/>

Raviglione MC, Smith IM. XDR Tuberculosis – Implications for Global Public Health. *N Engl J Med* 2007; 356:656-9. <http://content.nejm.org/cgi/content/full/356/7/656>

DHSS, in conjunction with the Heartland National TB Center, is planning a series of regional seminars entitled “A Model TB Prevention Program for College Campuses”. More information will be provided as it becomes available. Any questions may be answered by calling (573) 751-6122 or (866) 628-9891.